

Muncie Park & Recreation Board Meeting

MAY 21, 2019 6p.m.

City Hall Auditorium

1 & 2. President Yolanda Carey, called the meeting to order at 6:00 p.m. Yolanda asked everyone to stand for the pledge of allegiance.

3. Roll Call – Present was Yolanda Carey, Bev Kelley, Adrian Leavell , Bruce Reynolds. Absent was Mark Ervin.

4. Approval of previous Board Meeting for March 2019 was so moved by Adrian Leavell. Second by Bev. Kelley. Motion carried.

5. The Superintendent's Report was given by Harvey Wright.

The Parks dept. and P.C.R. have had a lot of trouble keeping up with mowing because of the rain. I want to thank the Parks staff for busting their tail to keep up with the mowing.

I want to announce Joan McKinney and her staff and Matt Walker and myself meet with the Park and Recreation Dept., put in for the convention to be held here in Muncie for 2020 in Feb. The City of Muncie was awarded that. I will have the final date as well as they have asked me to be on the committee and the first week in June is our first meeting and I will have more info at the next Park Meeting.

This is the first time they have held the state convention in Muncie. Roger Overby had an outstanding video presented at the state level to the different voting members that voted to bring the convention to Muncie. Job well done for the city of Muncie. Everything is on schedule at P.C. with the beach opening. As far as Tuhey pool opening, we'll go through our final inspection on Thursday and everything will be ready to go.

Bev Kelley asked if he had any prices for Tuhey. Harvey stated same prices as of last year.

6. Event Applications –.

1. Westside park June 6 2019 Muncie Public Library 12-2 p.m. for Library outreach and story time. Security will be provided by Library staff. Nothing need from Parks dept.

Vote was taken for the approval of event. 1st motion was by Bev Kelley and 2nd. Was Bruce Reynolds. Motion carried.

2. Bobby Jones for Chiari Syringomyelia See literature. Social event and 1 mile casual walk to raise awareness and funds for this syndrome. McCulloch park on June 8. From 5 pm to 8 pm. They will provide security for event. There will be mile markers for the event and free snacks. Expecting 75 people for this and you sign up with an email. Nothing needed from Parks dept. Vote was taken for approval of event. 1st motion Bev Kelley and 2nd motion was Adrian Leavell. Motion carried.

3. June 14-16. Rain date is June 22-23 at McCulloch. Basketball tournament to Stop the Violence. Jerel Allen and Justin Darden heading this event. To promote non-violence as well as encourage peace & unity. M.P.D. will be providing security. Vendors will be Deedee's Blessings and Unc's BBQ. Bleachers porta pots and totes, will be provided. Fourth year for this event and it is always successful. 1st motion was Bev Kelley 2nd was Bruce Reynolds . Motion carries.

4. The Jar Community Church youth group. June 30 ,2019 Westside park from 6-8 pm .Youth group fund raiser. Is a kick ball tournament for their church. They will provide security. They will play on the ball diamond. Food will be provided by church members for free. Vote taken 1st motion Bruce Reynolds 2nd motion Adrian Leavel. Motion carried.

5. July 13, 2019. Union missionary Baptist Church pick nick Anniversary for Pastor. Yevonne Thompson. McCulloch park. 11-4 pm. 100-150 people. Free food. Security provided by church members. Items needed, Stages x10 , cabin # 6 Bleachers, totes. 1st motion by Adrian Leavell. and motion Bev Kelley. Vote taken. Motion carried.

6. Westside park on July 20,2019. Jason Wickman. Back to school event from 12-6pm. Christmas in July. Will help supply kids for school and clothing for first day of school. Security will be supplied by the group. Nothing needed from the Parks dept. Vote taken 1st motion by Bev Kelley 2nd motion by Burce Reynold. Motion carried.

7. June 29,2019 at Heekin Park. Hallelujah Ministries, llc. Rick and Michelle Stonecifer. From 10-8 Christian music festival . 200 people. MPD will provide security for vent.

X 10 stages, totes, table top and horses porta pots. Faith builders Ministry will have free food. Vote taken 1st motion Bev Kelley 2nd motion Adrian Leavell. Motion carried.

8. The second annual NAACP Youth Basketball tournament at Heekin park.

June 20-30th. Starts at 10 To create positive attitude and event for our youth in our community. Expecting 200+ people. Security will be provided by the NAACP Muncie branch. Free food. Vendors will have to have vendor permits and health permiaats . X 2

basketball courts, score board, clock, easy up tents, tables, chairs. We have never had problems. Vote taken 1st motion Bruce Reynolds. 2nd Bev. Kelley. Motion carries.

9. Aug 3, 2019 cabin 5 Sabrina Haggard and Leeann Cole Open door wick. Breast feeding week. The Big latch on. Bring awareness to expectant mothers that choose to go that rout. 10-50 people. Security will be provided by them. No vendors. Vote taken. 1st motion Bev Kelley 2nd Adrian Leavell. Motion moved.

10. July 30. Thru Aug 4th 2019.Muncie Home coming festival. We've had this every 4yrs. Mcculloch park . Community outreach. Expecting 5 k to 8 k people or more.

MPD will provide security. 10to12 vendors with permits and Health permits.X 10 bleachers ,c # 6 2 stages, totes, and basket ball courts . It's a full activity . From Baseball field to Highland out to MLK BLVD. and the North side of Highland ave, for parking.

Vote taken 1st motion Bev Kelley 2nd motion Adrian Leavell. Motion carried.

7. Old Business

A. Special Events in the Parks in 2019- Harvey Wright

July 6 th Ron Bonham day west side of P.C.R. Remedy Home Town Band will open up for Seth Cook .Which he is out of Nashville Tenn. Everything is free boat lanch .swimming free fishing is free.. We are working on having an event call The Voice in the Parks. I have talked to the Voice group. And they are interested in it. I have spoked with Billy Macintosh and John Beaty. They are with Forward Vision .They are going to partner up with the parks. have spoken with security and the chief of police about this event. This will be Aug 17th at Mcculloch Over at the Basketball courts. We are still working out details and will have them next meeting . It will be early evening. Around 6ish in athe evening.

B. Arts and Crafts in the Parks –Harvey Wright

Arts and crafts and rummage in the park June 22,2019 Heekin Park. Starting at 8 in the am and ends at 4. Live music . Bleacher to watch the band . Rain date is net week end.

Band is Lee Whiteman band and Roger Hammond Band. Bill boards will be up for different events .

C. Seniors in The Park – Bev Kelley

June 19 Buley Center| July 17 Unity center

8. New Business

A. Campground appeal- Matt Walker

There were 6 people who didn't make the deadline on paying their camp fee. 5 People Moved out one person did not want to move out. See invoice.

He had a month to two months to pay he did not. He rebutted and said he was getting his lawyer. See letter that was sent to him.

Mr. Russel is the camper name. Mr. Russel had a conversation with the Mayor. The mayor told him if he wanted to rebuttal he had to come before the board for the decision. Matt Walker told Mr. Russel the camper could stay there until after this meeting. Matt stated P.C. is self-sufficient and without these fees paid on time, noting gets paid and works don't get paid. Two hundred campers met the dead line. Mr. Russel did not. My recommendation is to withhold my decision on making him move his camper

Mr. Russell spoke to the board members and gave his side of the argument. The Board members took a vote after hearing both sides of the argument and voted.

Board members voted. to have Mr. Russell removes his camper in a timely manner. The Parks board members unanimously upheld the rule for campers at P.C.R. to pay on time. Mr. Russell has to remove his camper.

B. Purchase of campground general store- Harvey Wright

We want to by the Bait house. The current owners closed it so P. C. wants to buy it so the fisherman that come to P. C. to fish can buy bait somewhere close and put with it a general store to help make revenue for P. C. We have two appraisals. See Appraisal sheets. We would like for the board to vote on this wheather or not we can buy this.

It would take 4 people to run it through the week and one or two on week end. Adrian Leavell asked if we had the budget to run the store. Harvey stated it would be like when we took Tuhey over we do not have a line item but . We will be coming up with a line item this year as we go into budget hearings. We will be selling bank passes and the product in the store and tackle and bait will help generate more revenue. That will help us not to take out of the budget. Also were looking to buy fuel as well for the boats. WE want on site a plae where they can buy fuel. Vote was taken 1st motion Adrian to buy property. 2nd motion Bruce Reynolds motion carried to buy the Bait House for P.C. R.

9. Other Business This is a call to the audience that may have items that needs the Boards vote. None

Public input Three Minute Limit; Please state your name and address

None

Meeting adjourned at 7:15 p.m.

Next meeting will be at 6 p.m. at City Hall on July 16, 2019

Respectfully submitted,

Phyllis Mills Secretary

Muncie Parks and Recreation Board Meeting
May 21, 2019 – 6 PM
City Hall

1. Call To Order.
2. Pledge of Allegiance.
3. Roll Call.
4. Approval of Previous Park Board Meeting.
5. Superintendent Report – Harvey Wright
6. Event Applications

7. Old Business:
 - A. Special Events in the Parks in 2019 – Harvey Wright
 - B. Arts and Crafts in the Parks – Harvey Wright
 - C. Seniors in the Parks – Bev Kelley
June 19, Buley Center/July 17,Unity Center

8. New Business:
 - A. Campground Appeal – Matt Walker
 - B. Purchase of campground general store – Harvey Wright

9. Other Business – This is a call to the Audience that may have items that need's the Boards vote.

10. Public Input – Three Minute Limit – Please state your name and address.

Remember to please call the Park Office or Board President if you want an item placed on the Park Board Agenda.

Next Park Board Meeting - July 16, 2019 – 6PM City Hall

6330 S CR 560 E, Selma, In 47383

**Broker/Auctioneer Price Opinion of Real Estate
For City of Muncie, Indiana**

- Legal description and parcel number per attached property Card
- 1.23 acre parcel zoned Variety Business
- Partially paved lot with parking area and driveway
- Fuel pump in rear, size and condition of tank unknown
- Older portion of building (1969) is 1140 sq ft, with Sheriff Goslin type roof in fair condition, exterior siding with exposed wood fascia and soffit in fair condition, older furnace appears to be non-functioning and area is heated with LP space heater, window type air conditioner, concrete floor is uneven and some peeling floor paint, interior room concrete bait tanks, small office area & unfinished bath
- Newer portion of building (1998) is 1280 sq ft, with metal siding and roof in good condition, heated with LP space heater, window type air conditioner, large area with concrete floor and bait tanks
- Location is adjoining Prairie Creek Reservoir and is ideal for seasonal retail sales

Comp # 1 has an average sq ft value of \$33.30

Comp # 2 has an average sq ft value of \$37.44

Comp # 3 has an average sq ft value of \$22.32

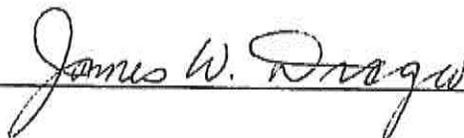
Average \$ per sq ft is \$31.02

Valuation:

Based on information listed above and on my experience as an auctioneer and Real Estate Broker, my Opinion of Value is \$75,000.00

April 20, 2019

James W. Dragoo



James W. Dragoo

BROKER/AUCTIONEER PRICE OPINION OF REAL ESTATE

Date: 04-20-2019

TO: City of Muncie, Indiana
Harvey Wright

RE: Business building
6330 S CR 560 E
Selma, In 47383

Pursuant to your request, I have inspected real estate located at: above address per attached legal description
for the purpose of evaluating its fair market value as of the 20th day of April 2019

Based upon the information contained in this report in the attachments and schedules attached hereto and hereby made a part here of and upon my general experience as a broker and auctioneer, it is my opinion that said real estate had an estimated fair market value on the above date of Seventy-five thousand dollars \$75,000.00

The term "Fair Market Value" as used in this report is defined as follows: the highest price estimated in terms of money which the property will bring if exposed for sale in the open market by a seller who is willing but not obligated to sell, allowing a reasonable time to find a buyer who is willing but not obligated to buy, both parties having full knowledge of all the uses to which it is adapted and for which it is capable of being used.

This valuation is based upon the following assumptions, limitations and conditions:

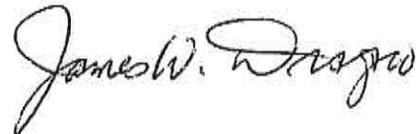
1. That title to the property valued is good and merchantable or that it will be prior to the time of sale.
2. That all liens and encumbrances, if any, have been satisfied and the property has been valued as though free and clear under responsible ownership and competent management.
3. That matters of legal nature have not been considered in this valuation.
4. That this evaluation report is made for the use of the named recipient only and that no part of it may be used or relied upon by any other person without the previous written consent of client and/or the broker/auctioneer.
5. That the fee for this valuation does not provide for or include compensation for conference or testimony and/or attendance at any court proceeding.

This undersigned broker/auctioneer hereby certifies:

1. That he has no interest now, heretofore or contemplated in the future, the property covered by this valuation.
2. That he has personally inspected the property to the extent that it was reasonably necessary and possible to do so.
3. That, to the best of his knowledge and belief, all statements and information included in this valuation are true and are based upon his objective findings and that no pertinent information has been knowingly withheld or deleted in this report.
4. That neither his employment to make this valuation nor his compensation for so doing is contingent upon the value of the property.

Even though it is the firm belief of the broker/auctioneer that the information furnished in this valuation report and the conclusions drawn from this information are true and correct they are not guaranteed.

Respectfully submitted



James W. Dragoo Real Estate Broker and Auctioneer

License Numbers RB14019588 AU09000082

9400 N. CR 925 W.
Alexandria, In 46001 765-748-6022 or 765-358-3534

6330 S 560 E, Selma, IN

The subject property is a 2420 square foot retail structure situated on 1.23 acres that is zoned variety business. The improvements on the parcel have a metal and wood exterior. The parking area is a paved lot and driveway. As you enter into the front door, you are greeted by an open room with 4 bait tanks. This area has a concrete floor with drains. The heat in this area is a propane wall heater and cooling is a wall air conditioner. To the north of this open room is the original building with a small reception area, large back room with bait tanks, a small office area and a bathroom. The original portion of the building is concrete with chipped enamel flooring. This area is heated with 2 wall propane heaters and cooling is a wall air conditioner. This area also has low ceilings and a peg board wall. The original portion of the improvements have been added onto several times and would benefit from updated roofing materials. The parcel also has 2 storage sheds. This property is conveniently located next to Prairie Creek Reservoir. The location lends itself well to providing an ancillary service to the reservoir and their patrons. However, the location does provide a limiting factor on the viability of a year round business in the building due to the seasonal nature of the reservoir patronage. These factors offset each other in regards to market value. Due to the varying size of the comparable commercial buildings, the value of the parcel is determined using a per square foot value.

	Subject	Comparable #1	Comparable #2	Comparable #3
Address	6330 S 560 E Selma, IN	1735 N Martin Luther King Muncie, IN	136 W State St. Albany, IN	2920 E Jackson St. Muncie, IN
Sale Date	N/A	12/6/18	6/5/17	12/12/18
Sale Price	N/A	\$50,000	\$185,000	\$125,800
Zoning	Variety Business	Variety Business	Variety Business	Variety Business
Classification	Small Retail Structure Under 10,000 Square Feet	Small Retail Structure Under 10,000 Square Feet	Small Retail Structure Under 10,000 Square Feet	Small Retail Structure Under 10,000 Square Feet
Square Feet	2420	2088	5025	3662
Sold Price/Square Foot	N/A	\$23.95	\$36.82	\$34.35
Average Sold Price/ Square Foot	\$31.70	N/A	N/A	N/A
Subject Value Based On Average Sold Price/ Square Foot	\$76,714	N/A	N/A	N/A

Upon consideration of all of the above factors, I feel as though a fair market value for this property is **\$76,500.00**

Sample

PRAIRIE CREEK RESERVOIR AND PARK



2019 SEASONAL INVOICE

NAME(S): Frank Russell / Courtney Russell

1st WR
Feb

200
Jan 11

	<u>LOCATION</u>	<u>PRICE</u>
DOCK		\$- 0
CAMPSITE	C220	\$1,000
GOLF CART (IF APPLICABLE)		\$25
TOTAL AMOUNT DUE:		\$1,025.00

Other information:

All fees are due by Friday, March 29th, 2019.

All campsites and docks **NOT** paid for by March 29th will be put on the availability list to be sold.

When making payment please remember:

- If mailing the payment in, the mailing address is: Prairie Creek Park, 300 N High St. Muncie, IN 47305
- If paying in person, lease holders must make the payment at the Boat Launch Office at Prairie Creek Reservoir. Payments will **NOT** be accepted at City Hall in person.
- Lease holders must complete the **ENTIRE** agreement. Prior to the 2019 season, information on the agreement was allowed to be left blank. This is no longer the case. PCR must have **ALL** updated registration numbers, boat make and models, camper types, addresses and phone numbers. PCR will be working with law enforcement to ensure all boats belong on the docks they are tied to. **It is required of the dock holder to be the registered owner of the boat.** As stated in the agreement, PCR does **not** allow sub-leasing. This will be **strictly** enforced starting this season.
- Please read, sign and mail the attached document with your payment and lease agreement. If the form is not signed and returned with the payment and agreement, a sticker will not be issued. This applies to only dock holders.
- **IF PAID IN PERSON, ALL INFORMATION MUST BE COMPLETED ON LEASE AGREEMENT OR PERMIT STICKER WILL BE NOT ISSUED.**
- The Prairie Creek Boat Launch Office winter hours are: **Monday-Friday 7:30am-11:00am and 1:00pm-3:30pm.** The office will **NOT** be open any weekends, government holidays, or for weather-related emergencies. You may call to check for availability.

(Information continued on back side)

FOR ANY QUESTIONS, CALL THE PRAIRIE CREEK BOAT LAUNCH OFFICE AT 765-747-4776



PRAIRIE CREEK RESERVOIR
C/O CITY HALL
300 N HIGH ST.
MUNCIE, IN 47305



7018 3090 0000 4757 7635

FINAL NOTICE

MANUS 238
1ST NOTICE 4-8-19
2ND NOTICE 4-13
4-23

C220-FRANK RUSSELL / COURTNEY RUSSELL
1208 S SHIPLEY ST
MUNCIE, IN 47302



UNCLAIMED

47302-374008



1000



47302

U.S. POSTAGE PAID
FCM LETTER
MUNCIE, IN
APR 04 19
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R2304N117310-06

\$4.05

PRAIRIE CREEK PARK

300 N High Street, Muncie, IN 47305 | 765-747-4776 |



04/03/2019

C220
Frank Russell / Courtney Russell
1208 S Shipley St
Muncie, IN 47302

Frank Russell / Courtney Russell,

It has come to our attention the fees due for the 2019 camping season for C220 have not been paid. Unfortunately, at this time, we are asking you to remove your camper from the campground by April 12th, 2019.

If the camper is not removed from the premises by this date, we will have Northwest Towing and Recovery remove the camper. The owner of the camper will be responsible for any fees the towing company will charge for removal and storage. If the camper is towed, Prairie Creek Park or the City of Muncie are not responsible for any damages that may occur removing the camper.

Thank you and have a great day!

Sincerely,

A handwritten signature in black ink, appearing to read "M Walker".

Matt Walker
Park Superintendent
Prairie Creek Park

Education

Research

Advocacy



Built on Leadership, Vision & Commitment to Find a Cure



Donate

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unite@night

[Walk Sites](#)

[Walk Guide](#)

[Online Walk Agreement](#)

[Solo Walks](#)

unite@night Chiari, Syringomyelia & Ehlers-Danlos Syndromes (EDS) Walks



UNITE@NIGHT - UNLOCKING ANSWERS

unite@night Chiari walk is a collection of one-mile, casual evening walks around the country that bring together people who are living with the devastating effects of Chiari malformation, syringomyelia, and related disorders. These walks help support local Chapters, large-scale research and education efforts and ongoing awareness projects that benefit the families in the United States and abroad who suffer every single day from these disorders.

Help us unlock the answers to these disorders. Each step you take, no matter how difficult, brings hope to patients and their loved ones. Be the key to unlocking real solutions.

If you would like to get involved or if you have any other questions/concerns about unite@night Chiari walk, send an email to unite@night@CSFinfo.org or call the unite@night office at (330) 998-8195. Fill out your [Walk Agreement](#) to get started today!



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Chiari & Syringomyelia Foundation

Built on Leadership, Vision & Commitment to Find a Cure



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SIGN UP NOW WAYS TO GIVE VOLUNTEER VIDEOS unite@nigh



CSF > EDUCATION > Physician Information > Syringomyelia

Education

Patient Information

[CNS & NMI Handbook](#)

[Asymptomatic Chiari](#)

[What is Chiari Malformation \(CM\)?](#)

[What is Syringomyelia \(SM\)?](#)

[What is Fliken-Darvas Syndrome \(FDS\)?](#)

[Pain Connection](#)

[Surgery](#)

[Helpful Items for Pain](#)

[Patient Rights](#)

[Find a Physician](#)

[CSF Disclosure - Updated 4/2019 \(PDF\)](#)

Physician Information

Basic Clinical Topics

[Chiari I](#)

[Chiari II](#)

[Syringomyelia](#)

[Congenital tethered cord](#)

[Tethered cord repair](#)

[CNS & NMI Handbook](#)

[Types of operations on Chiari I](#)

Novel, Rare, or

Controversial Topics

[Pain management](#)

[Tethered cord Chiari surgery](#)

[Chiari retractor](#)

[Review of controversial topics literature \(PDF\)](#)

Research Topics

[CSF Landspiegel Fluid Study \(manuscript\)](#)

[Endoneurial Perineuritis](#)

[Pain management review](#)

[Genetics research](#)

[Epidemiology research](#)

[Current clinical research - questions and others](#)

[Syringomyelia, Chiari Malformation and the Brain](#)

Clinical Problems

[Orthopedic Issues \(scoliosis\)](#)

Consider Chiari

[Chiari I](#)

[Chiari II](#)

[Syringomyelia](#)

[Tethered Cord](#)

[Spinal Cord Tumor](#)

[VP Shunt](#)

[Cervical Myelopathy](#)

[Cervical Spondylomyelopathy](#)

[Cervical Spondylitis](#)

[Cervical Spondylosis](#)

[Cervical Spondylolysis](#)

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Syringomyelia: Definition, Causes & Treatment Approaches

Definition

Fluid-filled cavity within the spinal cord. Other nomenclature: hydromyelia, syringohydromyelia, spinal cord cyst.

Signs and Symptoms of Syringomyelia

Dissociated sensory loss - pain and temperature are disrupted whereas light touch, proprioception, and vibratory sensation are often unaffected. Sensory disturbance is almost always asymmetric in a cape-like over the shoulders and back. Pain is frequently felt in the neck and shoulders.

Central Cord Syndrome: Centrally located syrinx, that injures the fibers located centrally (cervical) before the fibers located laterally (thoracic, lumbar, and sacral, in this order) in the spinal cord. A cervical syrinx often results in early symptoms (sensory loss and motor weakness) of the more distal muscles of the fingers and hands followed by late signs in the proximal muscles of the shoulders, trunk, and later the legs. A thoracic syrinx may cause motor weakness and sensory disturbance of the trunks followed by the legs.

Brainstem symptoms and signs: When the syrinx extends into the brainstem (syringobulbia), symptoms are common early on in the process. These usually consist of dysfunction of the lower cranial nerves with coughing, aspiration, and dysphagia.

Scoliosis: May result from unequal weakness of the spinal muscles. Young age, atypical curve, rapid curve progression, and back pain associated with scoliosis should alert one to the possible role of syringomyelia.⁹

Chronic pain: is associated with a variety of chronic pain syndromes, particularly in posttraumatic syringomyelia, in which there is an initial traumatic injury followed by later spinal cord injury secondary to syrinx distention; however, while it is nearly impossible to determine if the pain is caused by the syrinx or the primary pathology, it appears that treatment of the syrinx rarely results in resolution of the pain, which suggests that the pain may be related to the initial spinal cord injury.

Diagnostic Studies on Syringomyelia

Spinal MRI shows a dilated cavity with the same intensity of CSF on T2-weighted imaging. A complete *brain and spinal MRI* with and without Gadolinium is needed to determine the primary pathology. *Cine MRI* may also help in diagnosing abnormal CSF flow patterns. So far, results have been conflicting. Rarely, myelography may help to sort some of the more difficult cases.

Syringomyelia Treatment is Based on Etiology

Asymptomatic syringomyelia patients with small syrinx cavities and no obvious etiology are best managed with watchful waiting and serial imaging exams. The management of symptomatic or large syringomyelia is focused on identifying and treating the associated condition, which is the underlying cause of the syrinx.¹⁴ These etiologies include: Chiari I malformation; congenital tethered cord (spina bifida occulta); acquired tethered cord from previous surgery (such as myelomeningocele repair); spinal arachnoiditis (old viral or bacterial meningitis, etc.); spinal trauma; spinal cord tumor; VP shunt malfunction or Chiari II in spina bifida; idiopathic (unknown cause).

Chiari I malformation: Diagnosis made on MRI. Syrinx associated with Chiari I malformation is usually treated with posterior fossa decompression. If the syrinx does not resolve, one would consider (re-explore the posterior fossa and expand the decompression; consideration of subtle craniocervical instability; consideration of benign intracranial hypertension; consideration of shunting the syrinx directly; others).

Spina bifida: The syrinx may be the result of tethered spinal cord from the myelomeningocele repair, the Chiari II malformation, or ventricular shunt malfunction. The location of the syrinx within the spinal cord may help to dictate the treatment (i.e. lumbar syrinx may respond to tethered cord release and cervical syrinx to VP shunt revision or Chiari II decompression). Most surgeons agree to check the shunt first!

Spina bifida occulta (tethered cord): Diagnosis made on MRI. Patients with congenital tethered spinal cord should undergo exploration and tethered cord release in order to prevent future neurological and urological deficits. If the syrinx is large in cross-sectional diameter, it is often drained at the same surgery.⁶

Arachnoiditis (spinal inflammation): Diagnosis made on MRI. Spinal cord decompression with dissection of the arachnoid scar is performed. Reestablish normal CSF flow. If the arachnoiditis is so diffuse that it becomes impossible to achieve a good dissection, shunt the syrinx to the pleural or peritoneal cavities.

Spinal trauma: Post-traumatic syrinx is difficult to treat successfully. The syrinx can be a result of arachnoiditis and blockage of flow causing expansion of the cord or may represent an atrophic change secondary to the long-term consequence of a cord contusion.^{10,12} If a true syrinx is suspected, the treatment would consist of either arachnoid dissection as above, or a syrinx shunt into the pleura or peritoneum.

Spinal cord tumor: Diagnosis made on MRI. Syringomyelia associated with an intrinsic spinal cord tumor often have high protein content and may represent a secretory process from the tumor cells, or an obstructive process similar to other etiologies. Patients with tumor related cysts should be treated with tumor resection.¹¹ It is rare to have to shunt the syrinx in these situations.

Idiopathic (unknown cause): In a large percentage of patients, the syrinx has no identifiable cause. Those are difficult to treat. Most large and/or symptomatic syrinxes are treated with syrinx shunting. Rarely, a posterior fossa decompression is found to be successful in the absence of a Chiari malformation. Such patients who respond to decompression are thought to have a Chiari zero. It is so far impossible to predict which patient with idiopathic syringomyelia would respond to posterior fossa decompression. The strict definition of Chiari zero⁵ is "idiopathic syringomyelia that responds to posterior fossa decompression."

Residual central canal: Many patients are referred for evaluation of a thin, fluid-filled structure within the spinal cord with no associated pathologies. This structure usually tapers at each end and likely represents a normal variant: a remnant of a central canal normally present in embryos. These are usually incidental findings on scans obtained for unrelated issues. The patients are usually neurologically normal. In patients with back pain, other causes of the pain should be investigated.

Syringomyelia Prognosis and Outcomes

It is generally accepted that if the causative pathology is identified and treated, the long-term improvement and resolution of the syrinx is good.¹¹ Prognosis is also largely dependent on the prognosis of the primary pathologic that resulted in the syrinx. The syrinx in Chiari I patients generally responds well over time to posterior fossa decompression. In spina bifida, the symptoms must be separated into those related to the syrinx, the tethered cord, shunt malfunction, or less commonly, the Chiari II malformation. The results are often good when the etiology is found.⁶ In spina bifida occulta, a large syrinx has best prognosis with drainage of the syrinx at the time of tethered cord release. A small cavity is likely to remain stable over time and may even regress obviating the need for any treatment other than tethered cord release.⁶ The diagnosis of tethered spinal cord is made by MRI. In patients with spinal inflammation or arachnoiditis, stabilization of the syrinx can be achieved with decompression and arachnoid dissection in 83% of patients with focal scarring but only 17% of patients with scarring over multiple levels.⁷ Syrinx shunting alone results in very high recurrence rates. In post-traumatic patients, outcome is largely dependent on the pathology. If pain is secondary to atrophy from chronic damage to the spinal cord, it is not surprising that it will not resolve with shunting of the cavity. Long-term recurrence rates with shunting alone have been in excess of 80%.⁷ When considering surgical treatment, it should be noted that patients who have undergone previous surgery and failed, may have even worse outcomes. Patients with tumor related syringomyelia generally have good outcomes with tumor resection, assuming the tumor itself is curable. It appears that preoperative neurologic status is the main factor determining neurological outcome.¹¹

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